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2, 11, 17, 20, and 27 under 35 U.S.C. §102(b) as being anticipated by Ahr et al. (U.S. 5,997,520).

Claim 1 is directed to an absorbent article for alerting a wearer to urination. The absorbent article comprises a bodyside liner, an absorbent core, and a urine-permeable inflatable envelope located between the bodyside liner and the absorbent core. The urine-permeable inflatable envelope comprises a surfactant and a system capable of generating carbon dioxide upon being wetted with urine.

Ahr et al. disclose a disposable absorbent article having an expandable component, which provides a seal for reducing the leakage of body exudates from between the disposable absorbent article and the wearer's skin. The expandable component can be inflatable, and may comprise a gas evolving material and a liquid activating material separated from the gas evolving material by a breakable barrier. The breakable barrier comprises a liquid impervious breakable packet that can be broken by the wearer or diaper to combine the gas evolving material and the second activating material. Generally, the packet is broken by the wearer or diaperer at the "point of use" or when the diaper is fastened to the wearer. Once combined, the gas evolving material and the activating material generate a gas such as carbon dioxide, which inflates the expandable component to provide a seal between the article and the wearer's skin. The gas evolving material is preferably a combination of bicarbonate, such as sodium bicarbonate or potassium bicarbonate, and a powdered acid. The only second activating material disclosed is water.

Significantly, Ahr et al. fail to disclose: (1) an urine-permeable inflatable envelope; (2) a surfactant in the envelope;

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and (3) a system capable of generating carbon dioxide upon being wetted with urine. These are requirements of claim 1 and are significant aspects of Applicants' invention.

A close reading of Ahr et al. reveals that, in one embodiment, the breakable packet containing the liquid activating material and the gas evolving material are positioned inside of a gas permeable hydrophobic envelope, noted as 290. This gas permeable envelope 290 is then disposed in an inflatable chamber 230, the walls of which, 232 and 234, are both gas and liquid impermeable (See column 12). As such, both the activation material and the gas evolving material are positioned inside of a liquid impermeable structure; that is, a liquid, such as urine, could not penetrate the liquid impermeable walls and, as such, there is no urine-permeable inflatable envelope. Clearly, the Ahr et al. system is activated by the wearer or diaperer squeezing the breakable packet to mix the ingredients to produce the gas. Further, Ahr et al. actually teach away from using urine permeable components and urine as the activating agent at column 2, lines 12-28 where, in characterizing prior art, they say that the structure taught by [the prior art] primarily prevents core densification and suffers from the disadvantage that it requires an activator material from an external source (e.g., urine).

Additionally, the Office appears to equate the activating material (i.e., water) of the Ahr et al. reference with the surfactant of instant claim 1. Ahr et al., however, fail to disclose any surfactants for use in the envelope or otherwise in their gas generating system. The only activating material disclosed by Ahr et al. is water or a powdered acid dissolved in water. There is simply no disclosure of a surfactant.

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In the Response to Arguments section of the final Office action dated May 5, 2005, the Examiner asserts that, although the foaming agent limitations of the surfactant are found as examples or embodiments of the surfactant in the specification, they were not claimed explicitly. Nor was surfactant defined in the specification to require the foaming agent limitations. As such, there is no evidence in the specification to indicate that these limitations must be imported into the claims.<sup>1</sup> Applicants respectfully disagree. Specifically, the specification on page 13, paragraph 0036 of the instant application discloses that the surfactant component located in the urine-permeable inflatable envelope is present as a foaming agent. Additionally, throughout the specification, it is disclosed that the surfactant is present so as when a gas, such as carbon dioxide, is produced upon urination from the gas generating system located in the envelope, the gas interacts with the surfactant and a *foam comprised of bubbles is produced.*<sup>2</sup> As such, the surfactant of claim 1 has been defined in the specification as a foaming agent. As noted above, the second activating material of Ahr et al. (water) will not foam and produce bubbles upon activation; and thus, cannot be equated with the surfactant of claim 1. Regardless, Ahr et al. fail to disclose any surfactant as disclosed above.

Additionally, Ahr et al. fail to disclose a system capable of generating carbon dioxide upon being wetted with urine. In the Response to Arguments section, the Examiner appears to

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<sup>1</sup> Final Office action dated May 5, 2005 at page 8.

<sup>2</sup> For example, see instant specification on page 3, paragraph 0007; on page 4, paragraph 0015; and page 13, paragraph 0036.

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equate the limitation "point of use of the disposable diaper" in the Ahr et al. reference with "upon being wetted with urine" as required in claim 1. Applicants respectfully disagree. Specifically, Applicants assert that the "point of use of the disposable diaper" is at the time the diaper is first put on the wearer, prior to urination. As disclosed in the Ahr et al. reference, the breakable packet, which contains the second activating material for activating the first gas evolving material, can be broken by the wearer or diaperer by squeezing the packet between the thumb and forefinger prior to fastening the diaper on wearer (i.e., prior to urination).<sup>3</sup> By breaking the packet, the wearer or diaperer inflates the spacer in the disposable diaper creating a seal for reducing the leakage of body exudates from between the disposable absorbent article and the wearer's skin. Additionally, as stated above, in column 2, lines 20-25 of Ahr et al., the use of an activator (i.e., second activating material) from an external source, such as urine, is disadvantageous as the wearer may not urinate at the desired time, in the desired location, or in the desired amount to properly inflate the structure. As such, Ahr et al. fail to disclose a system capable of generating carbon dioxide upon being wetted with urine as required by claim 1.

As stated in M.P.E.P. §2131, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Since Ahr et al. fail to disclose a urine-permeable inflatable envelope comprising a surfactant in combination with a system capable of generating carbon dioxide upon being wetted

<sup>3</sup> U.S. Patent No. 5,997,520 at column 14, lines 4-8.; See

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with urine, Ahr et al. fail to disclose each and every limitation of claim 1. As such, claim 1 is novel over the Ahr et al. reference.

Claims 2 and 11 depend directly from claim 1. As such, claims 2 and 11 are patentable for the same reasons as claim 1 set forth above, as well as for the additional limitations they require.

Claim 17 is similar to claim 1 and further requires the urine-permeable inflatable envelope to comprise a surfactant and a system capable of generating a gas upon being wetted with urine. As such, claim 17 is patentable for the same reasons as claim 1 set forth above, as well as for the additional elements it requires.

Claims 20 and 27 depend directly on claim 17. As such, claims 20 and 27 are patentable for the same reasons as claim 17 set forth above, as well as for the additional elements they require.

2. Rejection of Claim 33 Under 35 U.S.C. §102(b)

Reconsideration is requested of the rejection of claim 33 under 35 U.S.C. §102(b) as being anticipated by Glaug et al. (U.S. 5,649,914).

Claim 33 is directed to an absorbent article for alerting a wearer to urination comprising a bodyside liner, an absorbent core, and a urine-permeable inflatable envelope located between the bodyside liner and the absorbent core. The urine-permeable inflatable envelope comprises a surfactant, a system capable of generating carbon dioxide upon being wetted with urine, and a

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also column 11, lines 12-18.

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temperature change agent.

Glaug et al. disclose a toilet training aid for use with an absorbent article. The toilet training aid is in the form of a pad that creates a noticeable, distinct feeling during urination, for example a temperature change sensation, a wet sensation, a dimensional change sensation, or some combination thereof to signal that urination is occurring. In one embodiment, the pad includes a casing, a temperature change member, a dimensional change member, and an attachment means for attaching the pad to a garment, such as a training pant. The casing includes a wet sensation layer designed to provide a wet or damp sensation against the skin upon urination and a support layer. Optionally, the support layer can be treated with a surfactant to aid in liquid transfer. Both the temperature change member and the dimensional change member are located between the wet sensation layer and the support layer. The temperature change member is responsive to contact with an aqueous solution such as urine to either absorb or release heat. The dimensional change member comprises a material that rapidly undergoes a change in at least one dimension when exposed to an aqueous solution. The dimensional change material can include expandable foams, compressed cellulosic sponges, or the like.

Significantly, Glaug et al. fail to disclose a urine-permeable inflatable envelope comprising a surfactant and a system capable of generating carbon dioxide upon being wetted with urine. Specifically, Glaug et al. fail to disclose any inflatable envelope at all. As there is no inflatable envelope, there is no inflatable envelope comprising a surfactant and a system capable of generating carbon dioxide upon being wetted with urine as required by claim 33. As best, Glaug et al.

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disclose a dimensional change agent selected from expandable foams, compressed cellulosic sponges, or the like.

In the Response to Arguments section of the final Office action, the Examiner asserts that the temperature change agent can include an acid such as sodium sulfate to absorb heat or a base such as sodium carbonate to release heat, and as such, this acid and base can react to generate carbon dioxide. While it may be possible for sodium sulfate and sodium carbonate to react and generate carbon dioxide, nowhere in Glaug et al. is it suggested or taught to combine the acid and base to produce a gas. As noted above, the temperature agent can either be an acid to absorb heat, providing the wearer with a cool sensation, or can be a base to release heat, providing the wearer with a warm sensation.<sup>4</sup> As such, Glaug et al. fail to disclose a urine-permeable inflatable envelope comprising a surfactant and a system capable of generating carbon dioxide upon being wetted with urine.

As stated above, for a claim to be anticipated, M.P.E.P. §2131 requires each and every element as set forth in the claim to be found, either expressly or inherently described, in a single prior art reference. Since Glaug et al. fail to disclose a urine-permeable inflatable envelope comprising a surfactant and a system capable of generating carbon dioxide upon being wetted with urine, Glaug et al. fail to disclose each and every limitation of claim 33. As such, claim 33 is novel over the Glaug et al. reference.

<sup>4</sup> See U.S. Patent No. 5,649,914 at column 8, lines 43-47.

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3. Rejection of Claims 3-10, 12-13, 16, 22-26, 28-29, and 32 Under 35 U.S.C. §103(a)

Reconsideration is requested of the rejection of claims 3-10, 12-13, 16, 22-26, 28-29, and 32 under 35 U.S.C. §103 (a) as being unpatentable over Ahr et al.

Claim 3 depends from claim 1 and further requires that the system capable of generating carbon dioxide upon being wetted with urine comprises an acid and a base, wherein the acid is potassium bitartrate and the base is sodium bicarbonate. Claim 1 is patentable for the reasons set forth above. Claim 1 has not been rejected under 35 U.S.C. §103(a). Therefore, claim 3, which depends from claim 1, is patentable for the same reasons as set forth above. In particular, the cited art fails to disclose or suggest a urine-permeable inflatable envelope comprising a surfactant in combination with the system capable of generating carbon dioxide upon being wetted with urine. Claims 4-10, 12-13, and 16 depend directly or indirectly from claim 1 and are patentable for the same reasons as claim 1, as well as for the additional elements they require.

Claim 22 depends from claim 17 and further requires the surfactant to be selected from the group consisting of anionic surfactants, nonionic surfactants, amphoteric surfactants, cationic surfactants, and combinations thereof. Claim 17 is patentable for the reasons set forth above. Claim 17 has not been rejected under 35 U.S.C. §103(a). Therefore, claim 22, which depends from claim 17, is patentable for the same reasons as claim 1 above. In particular, the cited art fails to disclose a urine-permeable envelope comprising a surfactant in combination with the system capable of generating carbon dioxide upon being wetted with urine. Claims 23-26, 28-

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29, and 32 depend directly or indirectly from claim 17 and are patentable for the same reasons as claim 17, as well as for the additional elements they require.

4. Rejection of Claims 1-2 and 16-21 Under 35 U.S.C. §103(a).

Reconsideration is requested of the rejection of claims 1-2 and 16-21 under 35 U.S.C. §103(a) as being unpatentable over Slavtcheff et al. (WO 01/56542).

Claims 1 and 17 are discussed above.

Slavtcheff et al. disclose a wiping article including a sachet having at least one water permeable wall and an effervescent cleanser composition. The effervescent cleanser composition generally includes from about 1 to about 80% of an alkaline material; from about 0.5 to about 80% of an acid material; and from about 0.1 to about 30% of a surfactant. When the alkaline material combines with the acid material in the presence of water, a gas such as carbon dioxide is generated. This effervescent reaction produces foam for cleansing the skin, leaving a squeaky clean rinsed feeling on the user's skin. Preferred alkaline materials are carbonates and bicarbonates and preferred acids are C<sub>2</sub>-C<sub>20</sub> organic mono- and polycarboxylic acids. Additionally, the effervescent reaction expands the wiping articles to many times their dry size when contacted with water.

Significantly, Slavtcheff et al. fail to disclose an absorbent article comprising a bodyside liner, an absorbent core, and a urine-permeable inflatable envelope located between the bodyside liner and the absorbent core and comprising a surfactant and a system capable of generating carbon dioxide

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upon being wetted with urine. Apparently recognizing these shortfalls, the Office states that it would be obvious to combine the gas-forming system and surfactant teachings of Slavtcheff et al. with the absorbent article layers well known to those skilled in the art to arrive at the absorbent article of claims 1 and 17. Applicants respectfully disagree.

In order for the Office to show a *prima facie* case of obviousness, M.P.E.P. §2143 requires that the Office must meet three criteria: (1) the prior art reference must teach or suggest all of the claim limitations; (2) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference, and (3) there must be some reasonable expectation of success. The Office has clearly failed to meet its burden under numbers (1) and/or (2) above, as the Slavtcheff et al. reference has not taught or suggested all of the claimed limitations and there is no motivation or suggestion to modify the Slavtcheff et al. reference to arrive at each and every limitation of Applicants' invention.

As noted above, Slavtcheff et al. fail to teach or suggest an absorbent article for alerting a wearer to urination comprising a bodyside liner, an absorbent core, and a urine-permeable inflatable envelope located between the bodyside liner and the absorbent core and comprising a surfactant and a system capable of generating carbon dioxide upon being wetted with urine. As such, all of the elements of claim 1 are not present.

Additionally, there is no motivation or suggestion to modify the Slavtcheff et al. reference to arrive at Applicants' invention. As noted above, Slavtcheff et al. use their effervescent cleansing composition comprising an alkaline

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material, an acid material, and a surfactant in a wipe to cleanse the user's skin, giving the user's skin a pleasant sensory feel. Specifically, the wipe, or sachet, allows the effervescent cleanser composition to exit the sachet to cleanse the skin. By contrast, the surfactant and system of Applicants' invention, which is capable of generating carbon dioxide upon being wetted with urine, remains contained in the inflatable envelope. As such, one skilled in the art would not and could not be motivated to use the composition of Slavtcheff et al. in an absorbent article for use as a toilet training aid as required in Applicants' invention.

In the Response to Arguments section, the Examiner asserts that although the surfactant and system capable of generating carbon dioxide being contained within the inflatable envelope are found as examples or embodiments, this limitation is not claimed explicitly. With all due respect, Applicants assert that even though this limitation is not explicitly claimed, one skilled in the art reading the application as a whole, which he is required to do, would realize that the carbon dioxide must remain within the inflatable envelope to alert the wearer of urination as it is this swelling that makes the wearer alert. As the Slavtcheff et al. reference is directed to a sachet or wipe comprising an effervescent cleanser composition for cleansing the skin, one skilled in the art would not be motivated to modify the Slavtcheff et al. reference to allow the cleanser composition to remain in the sachet or wipe. This relates to the second prong the Examiner must show in making an obviousness rejection under 35 U.S.C. §103(a), that of requiring some suggestion or motivation to modify the reference. Specifically, in establishing a *prima facie* case of obviousness

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to render a claim unpatentable, M.P.E.P. §2142 requires, *inter alia*, that the Office must show some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference teachings to arrive at Applicants' claim. The mere fact that a reference can be modified to arrive at the claimed subject matter does not render the resultant modification obvious, unless the prior art also suggests the desirability of the modification. See *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). This motivation or suggestion to modify prong is distinct from the first prong requiring each and every element to be shown in the prior art references.

As the Slavtcheff et al. reference fails to suggest or teach an absorbent article for alerting a wearer to urination comprising a bodyside liner, an absorbent core, and a urine-permeable inflatable envelope located between the bodyside liner and the absorbent core, wherein urine-permeable inflatable envelope comprises a surfactant and a system capable of generating carbon dioxide upon being wetted with urine, and as there is no motivation or suggestion to modify the Slavtcheff et al. reference, claims 1 and 17 are patentable over the Slavtcheff et al reference.

Claims 2 and 16 depend directly or indirectly on claim 1. As such, claims 2 and 16 are patentable for the same reasons as claim 1 set forth above, as well as for the additional elements they require.

Claims 18-21 depend directly or indirectly on claim 17. As such, claims 18-21 are patentable for the same reasons as claim 17 set forth above, as well as for the additional elements they require.

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5. Rejection of Claims 34-45 and 48-53 Under 35 U.S.C.  
§103(a).

Reconsideration is requested of the rejection of claims 34-45 and 48-53 under 35 U.S.C. §103(a) as being unpatentable over Glaug et al. in view of Ahr et al.

Claim 34 depends from claim 33 and further requires that the system capable of generating carbon dioxide upon being wetted with urine comprise an acid and a base. Claim 33 is patentable for the reasons set forth above. Claim 33 has not been rejected under 35 U.S.C. §103(a). Even if claim 33 was rejected as being unpatentable over Glaug et al. in view of Ahr et al., claim 33 would be patentable as the cited references, alone or in combination, fail to teach or suggest each and every claim limitation of claim 33.

In particular, the Glaug et al. reference fails to disclose a urine-permeable inflatable envelope comprising a surfactant and a system capable of generating carbon dioxide upon being wetted with urine. Apparently recognizing the shortcomings of the Glaug et al. reference alone, the Office attempts to find each and every element of Applicants' invention through a combination of the Glaug et al. and Ahr et al. references. Applicants assert, however, that the combination of Glaug et al. and Ahr et al. fails to overcome the shortcomings of Glaug et al. As noted above, Ahr et al. also fails to teach or suggest a urine permeable inflatable envelope comprising a surfactant and a system capable of generating carbon dioxide upon being wetted with urine. At best, Ahr et al. teach a gas evolving material and water in an absorbent article, which provides a seal for reducing the leakage of body exudates from between the

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disposable absorbent article and the wearer's skin. As such, the combined cited references fail to teach each and every limitation of Applicants' invention.

Regardless of whether the combination of the references shows each and every element (as noted above, Applicants assert that the references do not show each and every element), such a combination is improper as discussed herein and cannot properly be made to reject claim 33, or any other pending claims.

As noted above, in establishing a *prima facie* case of obviousness to render a claim unpatentable, M.P.E.P. §2142 requires, *inter alia*, that the Office must show some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine reference teachings to arrive at Applicants' claim. The mere fact that references can be combined or modified to arrive at the claimed subject matter does not render the resultant combination obvious, unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Ahr et al. is not directed to a toilet training aid as stated by the Office. On the contrary, Ahr et al. discloses an absorbent article having an expandable component, which provides a seal for reducing the leakage of body exudates from between the article and the wearer's skin. Specifically, the wearer of the absorbent article expands the article at the point of use of the absorbent article. As such, why would one skilled in the art look to Ahr et al. for possible combination with the toilet training pad of Glaug et al.?

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Additionally, the toilet training pad of Glaug et al. is desirably liquid-permeable.<sup>5</sup> As such, one skilled in the art would not and could not be motivated to combine the composition in Glaug et al. designed for a liquid-permeable toilet training pad with the absorbent article of Ahr et al. In Response to Arguments section, the Examiner points out that "a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations."<sup>6</sup> With all due respect, Applicants assert that the Examiner is combining the first and second prongs of a *prima facie* case of obviousness under 35 U.S.C. §103(a). Applicants assert that there is no motivation to combine the Glaug et al. and Ahr et al. references as one skilled in the art reading the application as a whole, which he is required to do, would not be motivated to use the composition of Glaug et al. designed for a liquid permeable toilet training pad with the absorbent article of Ahr et al., which provides for an expandable component with gas and liquid impermeable walls. This relates to the second prong the Examiner must show in making an obviousness rejection under 35 U.S.C. §103(a), that of requiring some suggestion or motivation to combine the references. This prong is distinct from the first prong requiring each and every element to be shown in the prior art references.

There simply is no motivation to combine the Glaug et al. and Ahr et al. references. As such, the cited references fail

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<sup>5</sup> Glaug et al. at column 12, lines 36-40 and lines 57-61.

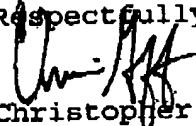
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to disclose or suggest each and every limitation of claim 33, and claim 33 is patentable over the cited references.

Claims 34-45 and 48-53 depend directly or indirectly on claim 33. As such, claims 34-45 and 48-53 are patentable for the same reasons as claim 33 set forth above, as well as for the additional elements they require.

In view of the above, Applicants respectfully request favorable reconsideration and allowance of all pending claims. The Commissioner is hereby authorized to charge any fee deficiency in connection with this Letter to Deposit Account Number 19-1345 in the name of Senniger, Powers, Leavitt & Roedel.

Respectfully Submitted,

  
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\* Final Office action at page 12, point 13.